

CLAIMS

What is claimed is:

1. A method of seamlessly transferring a communication session on an IP network from a first device to a second device, the method comprising:

5 initiating a session between a correspondent device and a first device having a first device IP address;

negotiating to transfer the session from the first device to a second device; and

10 transferring the first device IP address away from the first device to another device so that data transferred from the correspondent device to the first device via the address thereof will be received by the second device.

2. A method according to claim 1, wherein negotiating to transfer the session comprises:

15 creating a method for securely transferring the communication session from the first device to the second device.

3. A method according to claim 2, wherein the created method for securely transferring the communication session comprises:

20 generating a random number to serve as a session key for the secure transfer of the session between the first device and the second device.

4. A method according to claim 3, wherein the method further comprises:

25 encrypting the session key;

transferring the encrypted session key from one of said first device and second device to the other of said first device and second device; and

using the session key to securely transfer the communication session between the first device and the second device.

5. A method according to claim 1, wherein the method further comprises:

generating a wake-up message once the communication session is no longer to be transferred causing the first device to resume receiving communication sessions addressed to its IP address.

10. A method according to claim 1, wherein the transferring of the first device IP address comprises:

transferring the first device IP address from the first device to the second device so that data transferred from the correspondent device to the first device via the address thereof will be received by the second device.

15. A method according to claim 1, wherein the transferring of the first device IP address comprises:

transferring a session specific IP address from the first device to the second device so that data transferred from the correspondent device to the first device via the session specific address will be received by the second device.

20. A method according to claim 1, wherein the transferring of the first device IP address comprises:

transferring the first device IP address from the first device to a Session Agent so that data transferred from the correspondent device to the first device via the address thereof will be received by the Session Agent and routed to the appropriate device.

9. A method of seamlessly transferring a communication session on an IP network, the method comprising:

initiating a session between a correspondent device and a first device having a first device IP address;

5 negotiating to transfer the session from the first device to a second device; and transferring the first device IP address from the first device to the second device so that data transferred from the correspondent device to the first device via the address thereof will be received by the second device.

10. A method according to claim 9, wherein negotiating to transfer the session comprises:

creating a method for securely transferring the communication session from the first device to the second device.

11. A method according to claim 10, wherein the created method for securely transferring the communication session comprises:

generating a random number to serve as a session key for the secure transfer of the session between the first device and the second device.

12. A method according to claim 11, wherein the method further comprises:

20 encrypting the session key;

transferring the encrypted session key from one of said first device and second device to the other of said first device and second device; and

using the session key to securely transfer the communication session from the first device to the second device.

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13. A method according to claim 5, wherein the first device and the second device are located on different subnets and the method further comprises:

notifying an Agent of the desire to transfer so that the Agent can intercept the sessions addressed to the first device IP address;

5 intercepting the sessions addressed to the first device at the first device IP address via the Agent; and

tunneling the session from the first device to the second device once the first device IP address has been transferred to the second device.

14. A method according to claim 13, wherein the method further comprises:

authenticating the notice from the first device to the Agent to ensure that the first device is the source of the notice.

15. A method according to claim 13, wherein the method further comprises:

notifying the Agent whether the second device is authorized to transfer the session.

16. A method according to claim 13, wherein the method further comprises:

generating a random number to serve as a session key for the secure transfer of the session between the Agent and the second device;

encrypting the session key;

transferring the encrypted session key between the first device and the second device and the first device and the Agent; and

using the session key to securely transfer the communication session from the

25 Agent to the second device.

17. A method for transferring a communication session in an IP network from a first node to a second node via use of an IP address without disrupting the communication session, the method comprising:

initiating a communication session between a first node and a Correspondent

5 Node;

negotiating a transfer of the communication session between the Correspondent Node and the first node to the Correspondent Node and a second node such that the second node will generally assume the IP address of the first node;

10 notifying an Agent about the transfer so that the Agent can intercept communications addressed to the first node and forward the communications to the second node; and

15 intercepting and forwarding the communications addressed to the first node to the second node such that the communication session with the Correspondent Node continues without interruption.

18. A method of transferring a communication session between a Transferring Node and a Correspondent Node from the Transferring Node to a Target Node without disrupting the communication session, the method comprising:

20 initializing a communication session between a Correspondent Node and a Transferring Node;

negotiating a session transfer between the Transferring Node and a Target Node;

generating a random number to serve as a session key as a result of the negotiating;

25 encrypting the session key via a security association between the Transferring

Node and an Agent;

transmitting the encrypted session key between the Transferring Node and the Target Node;

5 notifying the Agent that the communication session is being transferred from the Transferring Node to the Target Node;

authenticating the transfer notification by having the Agent verify that the Transferring Node sent the transfer notification;

intercepting the session communications intended for the Transferring Node via the Agent; and

10 tunneling the session communications intended for the Transferring Node to the Target Node via the Agent.

19. The method of claim 18, wherein the method comprises:

determining whether the Transferring Node has permission to transfer the communication session; and

15 disabling the Transferring Node's ability to transfer the communication session if the Transferring Node does not has permission to transfer the session.

20. A system for seamlessly transferring a communication session between different devices on an IP network occurring between a correspondent and one of the devices, the system comprising:

25 a first device having a first IP address that is used to directed packets intended for receipt by the first device from the correspondent over the network to the first device;

a second device having a second IP address that is used to directed packets intended for receipt by the second device from the correspondent over the network to the

second device; and

a switch associated with the devices operable to enable the second device to receive at least certain ones of the packets intended for the first device from the correspondent for seamless session transfer between the device.

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21. The system of claim 20, further comprising:

an Agent for intercepting the sessions of communication directed to the first device at the first IP address and transferring these sessions to the second device.

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22. A system for seamlessly transferring a communication session on an IP network, the system comprising:

a Correspondent Node for transmitting and receiving packets of data within a session of communication;

a Transferring Node having a Transferring Node IP address and capable of participating in the session of communication with the Correspondent Node;

a Target Node capable of participating in the session of communication with the Correspondent Node; and

an IP network capable of transferring the session of communication between the Correspondent Node and the Transferring Node from the Transferring Node to the Target Node by transferring the Transferring Node IP address from the Transferring Node to the Target Node.

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23. A system according to claim 22, wherein the system further comprises:

an Agent for intercepting the sessions of communication directed to the Transferring Node IP address and transferring these sessions to the Target Node located on a foreign subnet.